## SEQUENCE LISTING

```
<110> James Karras
      Erich Koller
<120> ANTISENSE MODULATION OF TOLL-LIKE RECEPTOR 4 EXPRESSION
<130> ISPH-0618
<160> 33
<170> FastSEQ for Windows Version 4.0
<210> 1
<211> 20
<212> DNA
<213> Artificial Sequence
<223> Antisense Oligonucleotide
<400> 1
tecgteateg etecteaggg
                                                                   20
<210> 2
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Antisense Oligonucleotide
<400> 2
                                                                   20
atgcattctg ccccaagga
<210> 3
<211> 3811
<212> DNA
<213> Homo sapiens
<220>
<221> CDS
<222> (285)...(2684)
<400> 3
acagggccac tgctgctcac agaagcagtg aggatgatgc caggatgatg tctgcctcgc 60
gcctggctgg gactctgatc ccagccatgg ccttcctctc ctgcgtgaga ccagaaagct 120
gggagccctg cgtggagact tggccctaaa ccacacagaa gagctggcat gaaacccaga 180
gctttcagac tccggagcct cagcccttca ccccgattcc attgcttctt gctaaatgct 240
gccgttttat cacggaggtg gttcctaata ttacttatca atgc atg gag ctg aat
                                                  Met Glu Leu Asn
ttc tac aaa atc ccc gac aac ctc ccc ttc tca acc aag aac ctg gac
                                                                   344
Phe Tyr Lys Ile Pro Asp Asn Leu Pro Phe Ser Thr Lys Asn Leu Asp
                     10
                                         15
```

			ctg Leu								392
			gtg Val							_	440
			tat Tyr			_					488
			atc Ile								536
			aag Lys 90		_		_			_	584
			att Ile					_			632
			atc Ile								680
			gag Glu								728
			gac Asp								776
			ctg Leu 170								824
			att Ile								872
			gta Val						_	_	 920
			ttg Leu								968
			aaa Lys								1016
			tta Leu								1064

245					250					255					260	
	gac Asp				_	_			-					_		1112
_	gtg Val			_		_		_								1160
	cat His		_		_						_				_	1208
	ctc Leu 310															1256
	gct Ala			_	_	_			_					_		1304
-	aga Arg				_				_	_			-	_		1352
	aca Thr		_					_	_	_				_		1400
	atg Met	-				_			_			_		_		1448
	cag Gln 390								-						cta Leu	1496
	ctc Leu	-						_							_	1544
	gct Ala								-		-					1592
	atg Met						_	_								1640
	gag Glu	_	_		_			_				-	_		_	1688
	cag Gln 470	_				_						_		_	gta Val	1736
cta	aat	atg	agc	cac	aac	aac	ttc	ttt	tca	ttg	gat	acg	ttt	cct	tat	1784

Leu 485	Asn	Met	Ser	His	Asn 490	Asn	Phe	Phe	Ser	Leu 495	Asp	Thr	Phe	Pro	Tyr 500	
	_				ctc Leu	_	_		_		_					1832
					cag Gln	_						_	-		_	1880
					cag Gln		_		_	_		_	_		_	1928
_		_			atc Ile		_	_		_		_		-	_	1976
_	_	_		_	gca Ala 570				_		_		_			2024
_	_	_			acc Thr	_	_	_		_						2072
					ctt Leu					_	_	_	_	_		2120
	Phe	Tyr	Phe	His	ctg Leu	Met	Leu	Leu	Ala	Gly	Cys	Ile	Lys			2168
					tat Tyr	_	_		_				_	_	_	2216
					aat Asn 650			_	_							2264
					tgc Cys				-	_						2312
					atc Ile											2360
					tcc Ser											2408
					gct Ala											2456

```
ggt atc atc ttc att gtc ctg cag aag gtg gag aag acc ctg ctc agg
Gly Ile Ile Phe Ile Val Leu Gln Lys Val Glu Lys Thr Leu Leu Arg
                    730
cag cag gtg gag ctg tac cgc ctt ctc agc agg aac act tac ctg gag
Gln Gln Val Glu Leu Tyr Arg Leu Leu Ser Arg Asn Thr Tyr Leu Glu
                745
                                    750
tgg gag gac agt gtc ctg ggg cgg cac atc ttc tgg aga cga ctc aga
Trp Glu Asp Ser Val Leu Gly Arg His Ile Phe Trp Arg Arg Leu Arg
            760
                                765
aaa gcc ctg ctg gat ggt aaa tca tgg aat cca gaa gga aca gtg ggt
Lys Ala Leu Leu Asp Gly Lys Ser Trp Asn Pro Glu Gly Thr Val Gly
                            780
                                                785
aca gga tgc aat tgg cag gaa gca aca tct atc tga agaggaaaaa
                                                                   2694
Thr Gly Cys Asn Trp Gln Glu Ala Thr Ser Ile
    790
                        795
taaaaacctc ctgaggcatt tcttgcccag ctgggtccaa cacttgttca gttaataagt 2754
attaaatgct gccacatgtc aggccttatg ctaagggtga gtaattccat ggtgcactag 2814
atatgcaggg ctgctaatct caaggagctt ccagtgcaga gggaataaat gctagactaa 2874
aatacagagt cttccaggtg ggcatttcaa ccaactcagt caaggaaccc atgacaaaga 2934
aagtcatttc aactcttacc tcatcaagtt gaataaagac agagaaaaca gaaagagaca 2994
ttgttctttt cctgagtctt ttgaatggaa attgtattat gttatagcca tcataaaacc 3054
attttggtag ttttgactga actgggtgtt cactttttcc tttttgattg aatacaattt 3114
aaattctact tgatgactgc agtcgtcaag gggctcctga tgcaagatgc cccttccatt 3174
ttaagtctgt ctccttacag aggttaaagt ctaatggcta attcctaagg aaacctgatt 3234
aacacatgct cacaaccatc ctggtcattc tcgaacatgt tctatttttt aactaatcac 3294
ccctgatata tttttatttt tatatatcca gttttcattt ttttacgtct tgcctataag 3354
ctaatatcat aaataaggtt gtttaagacg tgcttcaaat atccatatta accactattt 3414
ttcaaggaag tatggaaaag tacactctgt cactttgtca ctcgatgtca ttccaaagtt 3474
attgcctact aagtaatgac tgtcatgaaa gcagcattga aataatttgt ttaaaggggg 3534
cactetttta aaegggaaga aaattteege tteetggtet tateatggae aatttggget 3594
ataggcatga aggaagtggg attacctcag gaagtcacct tttcttgatt ccagaaacat 3654
atgggctgat aaacccgggg tgacctcatg aaatgagttg cagcagatgt ttatttttt 3714
cagaacaagt gatgtttgat ggacctatga atctatttag ggagacacag atggctggga 3774
tccctccct gtacccttct cactgacagg agaacta
                                                                  3811
<210> 4
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Antisense Oligonucleotide
<400> 4
agagtcccag ccaggcgcga
                                                                   20
<210> 5
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Antisense Oligonucleotide
```

,

<400> 5 atcagagtcc cagccaggcg	20
<210> 6 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 6 agggccaagt ctccacgcag	20
<210> 7 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 7 ggtgaagggc tgaggctccg	20
<210> 8 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 8 cggcagcatt tagcaagaag	20
<210> 9 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 9 tagaaattca gctccatgca	20
<210> 10 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 10 tggcttaggc tctgatatgc	20
-210 \ 11	

<211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 11 agggctaaac tctggatggg	20
<210> 12 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 12 ccagaaaagg ctcccagggc	20
<210> 13 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 13 gtccagaaaa ggctcccagg	20
<210> 14 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400>, 14 tcatagggtt cagggacagg	20
<210> 15 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 15 aaaccagcca gaccttgaat	20
<210> 16 <211> 20 <212> DNA <213> Artificial Sequence	

<220> <223> Antisense Oligonucleotid	e
<400> 16 tggtcaaatt gcacaggccc	20
<210> 17 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	<b>3</b>
<400> 17 tgccagccat tttcaagact	20
<210> 18 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	<b>∍</b>
<400> 18 gctgcctctg gtccttgatc	20
<210> 19 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	<del>)</del>
<400> 19 ttcaaactca gcacaggcat	20
<210> 20 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	•
<400> 20 ggaccgacac accaatgatg	20
<210> 21 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	:
<400> 21	

acaagcacac tgaggaccga	20
<210> 22 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 22 gcagccagca agaagcatca	20
<210> 23 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 23 agctgaaatg gaggcacccc	20
<210> 24 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 24 gcagcaatgg ccacaccggg	20
<210> 25 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 25 ccacaacaat cacctttcgg	20
<210> 26 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 26 gcggctctgg atgaagtgct	20
<210> 27 <211> 20	

• •

<212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 27 ctccagaaga tgtgccgccc	20
<210> 28 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 28 tccttgagat tagcagccct	20
<210> 29 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 29 tgaaatgccc acctggaaga	20
<210> 30 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 30 ctgagttggt tgaaatgccc	20
<210> 31 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 31 catcttgcat caggagcccc	20
<210> 32 <211> 20 <212> DNA <213> Artificial Sequence	
<220>	

<223> Antisense Oligonucleotide	
<400> 32 agagtgcccc ctttaaacaa	20
<210> 33 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Antisense Oligonucleotide	
<400> 33 cccgtttaaa agagtgcccc	20